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U.S. Farm Sales to Arab Nations Soaring But Market Share Lags

By Ahmed Abou-Bakr

The Arab nations of the Middle East—their treasuries flush with petrodollars and economies modernizing at unparalleled speed—have emerged from relative obscurity to become some of the most exciting markets in the world today. U.S. agriculture and agribusinesses are sharing in this market growth, and U.S. farm sales there are picking up sharply. Yet a relatively static U.S. market share indicates an even better export record could be achieved.

Exports of U.S. farm products to Arab nations this year are heading toward an alltime high of around $1.6 billion nearly 50 percent above those of 1976 and almost 10 times the $170 million worth imported in 1968. This amounts to 6.6 percent of the $24 billion forecast for U.S. farm exports for this year, compared with an almost infinitesimal share a decade ago.

In addition, millions more are being spent on U.S. agribusiness expertise and products that Arab nations hope will boost their future agricultural production.

When viewed in terms of market share, however, the U.S. agricultural trade showing is less impressive: a likely 16 percent of the market in 1977, compared with 11.5 percent in 1968 and the record 17.4 percent achieved in 1974. Indeed, the U.S. market share has about held static since the big upward thrust in Arab buying that followed the 1973 petroleum price rise.

Yet millions of dollars in expenditures by Arab nations are budgeted for such goods and services each year, and U.S. agricultural firms and businessmen are being sought for joint-venture partnerships and supplies of farm products. Unfortunately, many U.S. firms are unfamiliar with the great potential of the Middle East, owing to lack of information about agriculture in these countries.

The big factor in the Arab nations today, of course, is money—earned from the region's petroleum wealth and piled up in foreign exchange reserves that totaled some $41.3 billion[2] as of December 1976. These reserves—adding up to 16 percent of the $256.6-billion world total, in an area that accounts for little more than 0.3 percent of world population—are making possible social and economic change such as has been seldom seen in recent times.

Virtually all the Arab nations are benefiting from the inflow of petrodollars, either directly—as in Saudi Arabia, Kuwait, and the other big petroleum producers—or indirectly—as in Egypt and Sudan, where Arab assistance is being used to fuel economic and agricultural development. Generally rapid population growth rates are adding to the pressure on supplies and institutions and, consequently, to the region's import needs.

In the food and agricultural area, eating habits are shifting to include more high-protein livestock and dairy products, vegetables, fruits, processed and frozen foods, and other items once considered luxuries.

To help satisfy the demand, countries are undertaking agricultural projects that range from greenhouse vegetable production in the United Arab Emirates, to modern poultry enterprises in Iraq, to sugar production in Sudan. Concurrently, there is frantic pressure to build the infrastructure — port handling and storage facilities, roads, railroads, airports—needed for the planned economic transformation.

Government policies and attitudes likewise are changing and in several cases have

[1]Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Maritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, Yemen Arab Republic, and Yemen Democratic Republic.

[2]For the petroleum-exporting countries of Algeria, Iraq, Kuwait, Libya, Saudi Arabia, UAE, Oman, and Qatar, which together exported $119 billion worth of petroleum in 1976.

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opened markets once all but closed to U.S. businessmen. For example, changes in organizational structures and political attitudes in Egypt and Sudan since the early 1970's have allowed U.S. business to enter those markets after a decade of antipathy. And Algeria is inviting American expertise and technology on a large scale to help modernize its agricultural sector.

Compared with the relatively small total population, resources of the Arab nations are great. According to the Food and Agriculture Organization (FAO), the Arab world has a population of about 126 million living on a land area totaling 1.362 billion hectares. But only 127 million hectares (about 9 percent) are suitable for agriculture, and just 30 million hectares are currently used for crops and animal production. Of these 30 million hectares, 9 million are irrigated.

The agricultural potential of some these countries is great. For instance, estimates indicate that Sudan, Iraq, and Syria could put into production 106 million hectares of new land—more than the total land area of the European Community. In addition, the application of modern technology to agriculture should bring strong gains in Arab crop output per hectare.

The remaining Arab countries have a more limited potential, although almost all nations of the region have some prospects for expansion. Indeed, some highly ingenious plans are on the drawing board as a result of the large amounts of money available for agricultural development. For example, $5.7 billion have been invested in the Sudan by the Arab Authority for Agriculture Investment and Development (see the July 18 issue of *Foreign Agriculture.*)

But there are also serious problems handicapping the Arab nations. These include relatively low levels of literacy, inadequate transportation systems, and political problems.

Imports of agricultural products by the Arab nations rose 27, 7, 38, 87, 17, and 15 percent, respectively, during 1971-76. This growth, from $1.77 billion in 1970 to $8.5 billion last year, is continuing in 1977, with imports headed toward the $10-billion mark.

U.S. agriculture will account for over $500 million of that increase, as imports from this country rise 46 percent over 1976's to a projected $1.6 billion. However, the gain is in part a recovery from the poor showing of 1976, when takings from the United States declined fractionally to a level just above the $1.09 billion shipped in 1974.

Thus far, growth in the area's imports from the United States has come in spurts. The first big gain was a doubling of trade to $500 million between 1972 and 1973. Arab imports of U.S. farm products then doubled again between 1973 and 1974 and held about steady before staging their sharp advance this year.

Egypt—taking mainly U.S. grains, oilseeds, and cotton, but also purchasing more poultry, dairy products, processed foods and other consumer-ready products—recently has been the biggest U.S. farm market in the Middle East. (However, much of this business is on a concessional sales basis.) The United States last year shipped $620 million worth of agricultural products to Egypt and anticipates a gain to $700 million in 1977. Some sources feel this most populous of the Arab nations could become a $1-billion U.S. agricultural market by 1980.

U.S. agricultrual exports to Saudi Arabia have also grown rapidly, rising about 500 percent between 1972 and 1976 to $156 million. A further sharp gain to $250 million is expected by 1978.

Although grains figure importantly in Saudi imports from the United States, that sparsely populated nation also ranks as one of the best Middle Eastern markets for U.S. consumer-ready foods, ranging from frozen poultry to peanut butter, beef, fruits, and vegetables.

Despite the abundance of marketing opportunities and the impressive export gains achieved already, the United States cannot afford to be complacent about the Arab farm market. With its balance-of-payments deficit expected to approach $25 billion this year—in large part a result of rising imports of Arab petroleum — the United States feels more pressure than ever before to sell in

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1976 Population and Gross National Product (GNP) and Per Capita GNP for Selected Arab Countries

Country	Population	GNP	Per capita GNP
	Millions	*million U.S. dol.*	*U.S. dol.*
Egypt	37.23	10,797	290
Jordan	2.70	1,114	412
Kuwait	1.03	10,982	10,662
Libya	2.44	1,018	4,172
Tunisia	5.97	2,778	465
Saudi Arabia	8.97	38,257	4,265
Yemen A.R.	6.67	813	121

Source: International Finance Statistics, International Monetary Fund, June 1977.

foreign markets, including the Middle East. But other countries are putting up stiff competition in the Arab markets. A few cases in point: European Community poultry, Brazilian soubeans, African tobacco, and Australian and Canadian wheat.

In Egypt, competition from Brazilian soybean oil contributed to the decline in sales of U.S. cottonseed oil—off 36 percent in value during 1976. Also, growth in U.S. tobacco exports to Egypt has been slowing, with marked growth in imports coming from Africa and Brazil.

And Australian exports of wheat to Egypt are seen rising by 50 percent to 1.5 million tons in 1977, while Canadian shipments are expected to shoot from insignificant levels to 500,000 tons.

The consequence of such stiff competition has been a near-stagnation of the U.S. share of Arab agricultural imports since 1973.

In addition to the continuing growth in imports of farm commodities, the Arab nations are extremely attractive markets for the products and services of American agribusiness.

On the arid Arabian Peninsula, ambitious projects to make the desert green have created a demand for greenhouse technology and equipment, irrigation systems, improved seed, roadbuilding and well-drilling equipment, consultant services, skilled labor, and a host of other goods and services.

Elsewhere, nations are investing in modern dairy and poultry enterprises, oilseed crushing plants, sugar factories, land reclamation and irrigation projects and numerous other agricultural enterprises.

The United Arab Emirates (UAE), for instance, traditionally has been unable to grow crops in the summer, owing to temperatures that can surpass 45°C (113°F) and rainfall of only 70-126 millimeters a year (2.8-5.0 inches). Yet a Government experiment station at Al Ain Abu Dhabi (one of the seven states of the UAE) planted 160 hectares of winter wheat and last year recorded average yields of 325 kilograms per hectare.

The UAE also is producing high-yielding vegetables in air-conditioned greenhouses. The best known of these is the Abu Dhabi Arid Land Research Station at Sadiyat Island, which is run by a team from the University of Arizona.

The July 15, 1977, *Middle East Digest* reported that three greenhouses earned yearly profits of $256,410 per hectare for cucumbers and $64,000 per hectare for tomatoes. (This is based on 8-10 greenhouses per hectare and a growing period for cucumbers of 6-8 weeks, which means about 60 crops a year from 10 greenhouses, or a profit per greenhouse of $4,000.) Outdoors, under sun shelters, the profit for tomatoes came to $36,800, including depreciation, on two plantings.

Reflecting the abundance of money available for agriculture, projects run big in the Middle East. For instance, the *Middle East Economic Digest* reports that one $5-million poultry farm already has been established in the UAE and two other farms, to cost $8 million and $38.4 million each, have been proposed.

Abu Dhabi also has undertaken extensive tree planting, with resulting big profits for landscape firms in the United Kingdom and other countries.

Similar projects are underway in Kuwait and Saudi Arabia.

Sudan is another area offering tremendous opportunities for agricultural investment (see the July 18 and July 25 issues of *Foreign Agriculture* magazine).

Sudan's current 6-year plan calls for expansion of sugar production in seven areas for a total output of 1.5 million tons of sugar by 1985, compared with 195,000 tons currently.

As a net sugar importer, Sudan has a sizable domestic market for its potential production. That market reportedly could rise to 400,000 tons by 1980 from the 260,000 tons of 1975, when Sudan had to import 132,000 tons of sugar. And the country should find ready markets for its sugar exports in nearby Arab nations.

Sugar from irrigated cane plantations has been produced on a large scale in Sudan since 1962 at the Guneid sugar factory and since 1965 at the Khashm El Girba sugar factory.

"Remarkable successes have been achieved in sugarcane growing and sugar processing in the two areas," said Dr. M. O. Abu Zein, head of the Sugar Planning Corporation. Experiments conducted throughout the country reportedly have resulted in yields of 110 tons per hectare, based on a 14-month growing season, compared with a national average of 95 tons. The experiments also produced sugar yields of 10.5 percent at the plantation level.

Saudi Arabia likewise offers tremendous potential for U.S. investments and exports. The country's official reserves at the end of 1976 totaled $27 billion, compared with $23 billion in the previous year. Revenues are expected to rise further to $31 billion this year.

With all this money to spend, and revenues still rising, the Saudi Government has moved to invest liberally in agricultural production and farm industry and to secure reliable sources of food and farm products for other Arab countries in the Middle East. □

"To help satisfy the demand, countries are undertaking agricultural projects that range from greenhouse vegetable production in the United Arab Emirates, to modern poultry enterprises in Iraq, to sugar production in Sudan. Concurrently, there is frantic pressure to build the infrastructure—port handling and storage facilities, roads, railroads, airports—needed for the planned economic transformation."

U.S. Share of Middle East Agricultural Markets

[In percent]

Country	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Algeria	—	—	—	—	—	—	—	13.98	10.77	8.57	13.92	17.1	21.05	21.24	—
Egypt	55.39	41.44	48.38	32.72	42.1	9.37	2.89	8.8	12.55	11.15	15.4	39.52	31.02	32.76	28.3
Libya	4.48	4.86	4.68	4.52	4.3	5.31	8.1	4.38	4.57	3.33	2.23	2.01	5.51	2.2	3.0
Morocco	21.63	24.18	27.44	22.96	22.71	17.42	28.64	15.89	27.7	34.44	19.57	23.62	20.97	9.22	—
Sudan	5.85	8.34	9.8	15.91	14.19	18.51	.81	.55	.59	.7	11.83	23.39	11.52	18.13	14.3
Tunisia	52.01	23.6	19.39	52.31	38.84	43.07	47.86	33.22	29.15	26.48	25.30	20.59	19.73	16.15	—
Bahrain	—	—	—	—	—	—	—	—	—	—	2.5	3.1	4.9	4.66	7.2
Iran	28.27	25.06	22.27	28.57	22.15	10.78	9.03	12.5	21.53	23.5	24.94	24.26	42.57	24.61	10.9
Iraq	3.36	6.21	12.64	2.8	3.55	4.41	1.47	2.06	1.74	2.85	1.1	14.48	16.28	12.71	6.3
Israel	33.57	37.92	34.2	50.91	44.71	43.88	51.47	44.08	44.04	48.09	42.45	46.06	43.4	45.79	65.2
Jordan	24.72	30.47	20.31	19.75	24.58	19.45	11.83	14.96	15.87	9.15	14.	13.48	5.56	11.67	14.4
Lebanon	4.57	5.24	5.42	10.75	13.16	7.82	10.31	7.64	11.17	11.67	13.88	11.62	21.32	12.14	9.9
Saudi Arabia	—	—	—	—	—	—	—	13.05	12.35	10.06	11.61	16.06	21.61	19.22	16.4
Syria	20.68	.75	1.57	8.96	13.71	10.26	.39	.89	1.51	8.67	3.27	.1	2.09	12.87	10.9
Yemen (AR)	—	—	—	—	—	—	—	14.4	11.83	1.24	3.82	9.39	6.66	5.27	9.1
Yemen (Dem)	—	—	—	—	—	—	—	2.43	2.5	2.64	.66	3.86	11.34	.31	1.8
Kuwait	—	—	—	—	—	—	—	3.24	3.25	3.64	2.65	4.18	7.75	3.46	3.4

Source: FAO Trade Year Books, 1960-75.

Total Agricultural Imports by Countries of the Mideast And North Africa and U.S. Market Share

Country and region	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977[1]
	Mil. dol.	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*
Egypt	248.6	217.1	209.6	309.5	283.5	311.2	1,105.4	1,451.6	1,601.0	2,000
Libya	88.8	99.9	125.6	156.3	173.1	319.6	472.6	461.0	596.0	650
Sudan	55.5	37.6	65.0	74.9	82.7	116.5	157.6	169.6	180.0	200
Lebanon	154.8	143.2	149.8	178.4	196.4	256.1	329.6	325.0	198.0	250
Syria	69.1	63.7	101.8	160.5	124.9	164.3	354.9	333.0	365.0	400
Jordan	52.1	68.4	68.8	75.9	94.7	113.5	164.5	161.9	200.0	230
Iraq	86.7	87.7	97.9	221.0	148.5	223.5	705.4	707.0	977.0	1,180
Bahrain	20.0	23.5	30.6	57.9	43.6	41.0	56.2	64.3	74.0	90
Saudi Arabia	147.6	202.8	222.5	236.0	282.5	408.0	509.3	756.0	974.0	1.285
Kuwait	103.0	112.0	123.0	120.1	147.3	187.3	249.7	381.3	435.0	525
United Arab Emirates	27.1	34.0	40.2	49.2	66.0	80.2	197.4	305.0	400.0	465
Yemen Arab Republic	14.3	13.2	15.8	21.0	43.6	59.4	82.0	97.0	125.0	175
Peoples Dem. Rep. of Yemen	49.0	53.3	53.5	86.6	101.6	127.1	144.0	150.2	160.1	170
Oman	11.4	16.0	19.0	10.6	15.1	31.4	47.0	115.0	131.0	147
Quatar	10.2	12.2	14.7	24.3	31.0	45.9	48.0	62.0	74.0	80
Total Arab Mideast	1,138.2	1,184.5	1,337.8	1,782.2	1,834.5	2,485.0	4,618.9	5,539.9	6,490.1	7,847
Iran	142.4	102.7	141.3	253.5	304.7	448.6	1,254.7	1,957.8	2,400.0	2,550
Israel	179.0	190.9	219.7	264.8	266.7	420.2	591.4	408.8	405.0	450
Turkey	30.0	74.5	116.6	103.4	75.6	80.7	431.1	395.3	220.0	195
Cyprus	27.0	33.2	38.9	39.9	53.0	104.1	81.9	76.8	82.0	90
Subtotal	378.4	401.3	516.5	661.6	700.0	1,053.6	2,359.1	2,838.7	3,107.0	3,285
Total Mideast	1,516.6	1,585.8	1.854.3	2,443.8	2,534.5	3,538.6	6,978.0	8,378.6	9,597.1	11.132
Algeria	168.9	167.5	173.6	206.3	297.2	416.7	809.9	1,009.0	1,079.0	1,200
Tunisia	116.1	118.2	167.5	193.5	189.3	322.5	595.6	607.4	588.0	600
North Africa	341.5	356.9	432.7	480.3	590.7	872.0	1,651.7	1,893.6	1,958.0	2,100
Total Mideast and North Africa	1,858.1	1,942.7	2,287.0	2,924.1	3,125.2	4,410.6	8,629.7	10,272.2	11,555.1	13,232
Total Arab	1,479.7	1,541.4	1,770.5	2,262.5	2,425.2	3,357.0	6,270.6	7,433.5	8,448.1	9,947
Total Arab imports from U.S.	170.4	153.9	193	253.2	248.2	501.9	1,091.6	1,139.1	1,096.6	1,606
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
U.S. share	11.48	9.99	10.90	11.19	10.23	14.95	17.41	15.32	12.99	16.14

[1] Forecast. Source: Bureau of the Census, U.S. Dept. of Commerce, and ERS estimate for 1977.

Australia Expects Record Beef Output And Exports

Australia's beef production and exports are headed for record highs in 1977.

Exports of live sheep are expected to continue at a high level in response to strong demand in the Middle East.

Beef output for the year is estimated at 1.95 million metric tons, up 4 percent from the record 1976 level, and exports are forecast at 675,000 tons (1 million tons, carcass-weight equivalent), compared with 573,000 tons a year earlier.

Prices, however, are a continuing problem to beef producers. Although stockyard prices in May were above those of a year earlier, they are below levels attained in March.

Good-quality beef for the Japanese chiller trade in May was bringing the equivalent of 24-26 U.S. cents per pound (dressed weight), compared with 29-31 cents in March.

Australia's Bureau of Agricultural Economics believes cattle prices will increase about 25 percent this fiscal year, rather that by 35 percent as forecast earlier, because of the unprecedented numbers being marketed.

Seasonal conditions are generally fair to good throughout most of Australia. Water supplies are adequate in most areas, although southwest New South Wales and parts of Victoria are short of moisture and some areas in Western Australia are dry and short of feed.

Livestock generally are in good condition and there is only limited hand feeding. Even if seasonal conditions improve, however, slaughter is expected to remain high during 1977.

The rate of female cattle and calf slaughter is continuing at about the same high rate set in 1976. Beef and veal production in first-quarter 1977 was 10 percent higher than a year earlier. However, this rate of increase is not expected to continue.

Total beef and veal exports during 1977 are expected to be up 18 percent from the 1976 level. The major outlets, in order of importance, will be the United States, the USSR, Japan, the Middle East, and Eastern Europe.

Beef and veal exports to the United States are estimated at about 300,000 tons, or near the agreed voluntary-restraint level for 1977. However, heavy export commitments to other markets and difficulties with the diversification scheme resulted in exports to the United States below last year's levels in the early months of 1977.

Many industry sources in Australia believe there will be no problem meeting the voluntary-restraint agreement, since U.S. prices are expected to increase during the second half of 1977 and current USSR orders will be filled in the first half. Adequate shipping space will be available to move the meat, and the United States is regarded as the premium market.

Shipments to the United States against the voluntary restraint level, including carryover from 1976, through June 1977 are estimated at 167,000 tons.

Shipments in July and August are projected at about 69,000 tons, leaving about 60,000 tons for shipments in September and October.

The Meat Board hopes to complete shipments to the United States by the end of October, but additional shipments could be authorized for November if needed to reach the agreed level for 1977.

Total exports of Australian beef to Japan during 1977 are estimated at 70,000 tons, down 2,000 tons from the 1976 level. The outlook for sales to the Middle East has improved with the sale to Egypt of 18,000 tons and the report that Egypt may be in the market for an additional 10,000-12,000 tons. Iran is expected to take 10,000 tons and israel at least 10,000 tons. Total sales to the Middle East in 1977 are estimated at 55,000 tons.

Sales to Canada during 1977 are estimated at the quota level of 26,921 tons set by the Canadian Government. This quantity includes Australian meat held in Canadian bonded warehouses on January 1, 1977. Australian exporters see little prospect of a larger quota.

The estimate of sales to the USSR has been increased by 5,000 tons to 75,000 tons. Existing contracts cover 55,000 tons, and some exporters have reported that they have been asked to submit bids. Rising prices are expected to dampen prospects for shipments beyond an additional 10,000-15,000 tons, however.

Sales of manufacturing-quality beef to the European Community (EC) during 1977 are not likely to develop to the extent believed possible earlier in the year. Based on shipments so far, it seems unlikely that the EC will import more than 25,000 tons of Australian beef this year.

Prospects for sales of beef to Eastern Europe look good. Sales could reach 50,000 tons, despite the shortage of foreign exchange in these importing countries.

Australia's stocks of frozen meat have risen dramatically. Stocks at the end of February totaled 115,939 tons, compared with 79,389 a year earlier. The increase is a result of a substantial expansion in slaughter and a build-up by exporters to fill foreign contracts.

The outlook for Australian mutton and lamb during 1977 is good. Sheep numbers are estimated at about 140 million head, 6 percent fewer than a year earlier, because of the drought and the smaller lamb crop. Demand is good for replacement ewes to rebuild flocks. About 1.5-2 million live sheep are expected to be exported to the Middle East during 1977.

Mutton production in 1977 is forecast to be down about 15 percent from the year-earlier level to 285,000 tons. Exports are estimated at 134,000 tons (product weight), with Japan taking about 80,000 tons of the total. Export prices for mutton are about 45 percent above the year-earlier level.

The sharp drop in this year's lamb crop has resulted in high lamb prices. In May, lamb was quoted at the equivalent of 87 U.S. cents per kilogram (dressed weight), compared with 67 cents a year earlier. Production during 1977 is estimated at 250,000 tons, 5 percent above output during 1976.

Total lamb exports are estimated at 35,000 tons, of which about 27,000 tons are expected to go to the Middle

Based on a report from Harlan J. Dirks, U.S. Agricultural Attaché, Canberra.

Droving sheep, New South Wales

East and about 3,000 tons to the United States.

Australia's 1976/77 wool clip has been estimated at 725 million kilograms, 4 percent less than the year-earlier total. Average fleece weight is lower because of the 1976 drought. The gross value of wool production in 1976/77 is estimated at the equivalent of US$1.37 million, 23 percent above the year-earlier level, and exports are valued at an estimated US$1.38 million, indicating that some sales were made from the Government stockpile.

However, it is unlikely that the Government will be able to reduce its 1.2-million-bale stockpile to the forecast level of 600,000 bales. Current estimates are for a carryover into the 1977/78 selling season of just under 1 million bales.

The outlook for the wool industry remains generally favorable and the Australian sheep industry is poised for expansion. The demand for mutton and lamb is expected to be a more important economic factor than wool in the years ahead, and some producers are shifting from cattle to sheep.

A proposal to replace the 10-member Australian Meat Board with a nine-member Australian Meat and Livestock Corporation was approved by the Parliament in June.

In addition to an independent chairman and a Government representative, the corporation includes four livestock industry representatives, one exporter, and two specially qualified members.

Although the bulk of the Board's functions and powers are retained by the Corporation, several significant changes have been made, including:

- Provision for responsibility for livestock exports;
- Clarification of export control powers;
- Authorization for the Corporation to trade without the need for prior consultation with private exporters;
- Provision of powers with respect to quality of meat and livestock exports;
- Extension of borrowing powers.

Grain Harvests Up in GDR

The German Democratic Republic is expected to produce about 8.8 million tons of grain in 1977, up from 8.2 million in 1976 and approximately equal to the 1972-76 average.

Wheat production is expected to reach 3.2 million tons, up from the 2.7-million-ton crop of 1976 and the 2.8-million-ton 5-year average.

The barley crop is estimated at 3.4 million tons, compared with the 3.5-million-ton crop in 1976 and the 2.8-million-ton 1972-76 average.

Early season rains favored grain crops. However, later rains delayed the start of the harvest by 2 weeks. □

Argentine Wheat Area To Fall

Low wheat prices and stronger prices for other grains and oilseeds have caused Argentina to reduce its planting intentions for the 1977/78 wheat crop by 20 percent to 5.6 million hectares, with 5.0 million hectares expected to be harvested.

Lowered plantings may reduce the Argentine wheat crop to approximately 7.5 million metric tons, compared with last season's 11.0 million tons.

Should dry weather conditions in western and southwestern Argentina prevail, the area planted to wheat in 1977/78 could be reduced even further.

Exports for the 1977/78 marketing year (December-November) are forecast at 3.5 million tons, compared with an estimated 6.0 million tons shipped during 1976/77.

The 1978 rice crop (harvested next March-June) has been estimated at 330,000 tons—roughly the same as this year. Rice producers are displeased with prices, but most of them have no other alternatives to rice.

Harvested area for Argentina's 1978 corn crop (harvested next March) is now forecast at 2.7 million hectares, compared with 2.6 million harvested in 1977.

Owing to reduced area and weather conditions that are unlikely to match those producing record yields in 1977, corn output in 1978 is currently forecast at 7 million tons, 1.5 million below the 1977 level.

Corn exports during April 1977-March 1978 are expected to reach 4.5 million tons, compared with 3.2 million during April 1976-March 1977. Exports during 1978/79 are likely to be down as well. □

Hungary Sets High Grain Export Target

By Nicholas M. Thuroczy

Despite a 1976 Hungarian grain crop 9 percent less than the production target, and exports about the same as in 1975, Hungary expects to boost yields so as to be able to export 3 million tons of grain by 1980. A grain crop of 14 million tons will be necessary to support exports at this level. In 1976, grain output was just 11.3 million tons.

Although 1976's grain production was 9 percent less than the target set by Hungary's 1976-80 plan, and exports were about the same as those of the previous year, that country expects to boost outturn sufficiently in the next 3 years to be able to double exports. Grain area is expected to grow only slightly, but yields are to be pushed through improved technology and greater mechanization.

If exports of 3 million tons are to be achieved by 1980, that year's production—at 14 million tons — would be sharply above that of the early 1970's. During the first 5 years of the decade, production averaged about 10.4 million tons, exports 1.1 million, and imports about 488,000 tons.

The drive to boost production to the targeted level got off to a bad start last year when drought reduced grain output to only 11.3 million tons, noticeably under the planned 12.4 million. Nevertheless, Hungary is confident that given adequate supplies of seed, machinery, fertilizer, plant protection chemicals—and normal weather—it can easily boost exports to 3 million tons by the end of the current planning period.

Weather in Hungary—as everywhere else in the world—ultimately influences the size of the total grain crop, but weather's impact is moderated somewhat by the crop's composition. Roughly half of the country's grain is harvested during the summer (small grains, including wheat), while another third is reaped in the fall (corn).

Thus, a heavy rain during the spring harvest—as happened in 1975—could adversely affect the outcome of summer grain production, but might benefit the fall crop.

On the other hand, a dry spell during the summer harvest—as in 1976—would probably have the opposite effect. But in either case, Hungary would produce an approximately "average" grain crop. This relative stability helps Hungary maintain a predictable level of output in most years.

As in past years, the success of Hungary's 1980 export plans depends on grain sales to its CEMA partners. (CEMA is the Council for Economic Mutual Assistance—Communist cooperative grouping composed of Bulgaria, Czechoslovakia, Cuba, the German Democratic Republic (GDR), Hungary, Outer Mongolia, Poland, Romania, and the Soviet Union.)

Roughly one-half of the 1980 exports will probably be wheat, the remainder corn, and most will go to Czechoslovakia, the GDR, and the USSR. Grain shipments within CEMA are subject to settlement on convertible currency accounts, and so some of Hungary's exports will be paid for in goods that otherwise could be obtained only for hard currency.

Although still modest when compared with the volume of world grain trade, a 3-million-ton export to CEMA countries should help to reduce their reliance on Western grain.

At first glance, the 1980 targets seem too ambitious. Between 1976 and 1980, grain output ostensibly would have to be pushed nearly 2.7 million tons, or 24 percent, higher than the 1976 level. But examination of Hungary's grain production-distribution pattern and of recent advancements in production technologies suggest that the 14-million-ton production goal and the 3-million-ton export target are feasible.

The 12.0-million-ton crop in 1975 and the 11.3-million-ton outturn in 1976 were both reduced by adverse weather, which 1 year affected the summer grain crop and the next, the fall crop. By contrast, in 1974—when weather was more nearly normal—grain output was 12.3 million tons.

Because it is unlikely that the adverse weather of 1975 and 1976 will be repeated this year, 1977's outturn may come close to 12.8 million tons. And if weather remains favorable each year until 1980, it appears that Hungary has to boost output only about 1.2 million tons to reach 14 million tons by 1980.

Thus far, Hungary's grain production—which climbed from 1970's 7.5 million tons to the 11.3 million tons of last year—has provided sufficient supplies to allow export and livestock industry growth to edge upward simultaneously.

Also, while the livestock sector has used steadily increasing amounts of grain, domestic nonfeed grain utilization has remained about constant. The pattern of grain utilization in coming years should remain roughly the same to allow the additional production to be diverted into exports, except for the less-than-300,000-ton rise in grain usage by the livestock sector. By 1980, livestock consumption should total 8.2

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million tons, compared with 7.9 million in 1975.

Comparing average growth in the livestock sector in 1971-75 with that projected for 1976-80, Hungary's 5-year plan details a projected increase by 1980 of 15.5 percent in milk production to 2.26 billion liters; of 12.5 percent in slaughter cattle to 381,000 tons; of 9.5 percent in slaughter pigs to slightly more than 1 million tons; of 14.5 percent in eggs to 4.2 billion; and of 15 percent in slaughter poultry to 383,000 tons.

This relatively slower rate of growth in the livestock sector—which traditionally absorbs about two-thirds of Hungary's grain production—should help up grain exports. It seems likely that a 14-million-ton grain outturn will be able to support exports of 3 million tons.

Hungary's grain production uptrend has been influenced by the introduction of better seeds, more farm machines, heavier applications of fertilizers and plant protection chemicals, and the spread of industrial growing methods.

Depending heavily on new plant developments to boost production, without requiring a larger area, Hungary in recent years has introduced a number of high-yielding wheat and corn varieties resistant to plant diseases and suitable for large-scale plantings.

Partly because of their introduction, wheat yields have increased from 3.08 tons per hectare in 1971 to 3.88 tons in 1976. Research to improve yields still further is scheduled to continue, with the ultimate aim of stabilizing yield by 1980 at 4 tons per hectare, which could boost wheat output to 5.5 million tons.

About 90 percent of Hungary's corn area each year is sown to domestically developed hybrids. Their use has boosted corn yields from only 3.58 tons per hectare in 1971 to 5.02 tons in 1975. The aim of Hungary's agriculture experts is to stabilize country-wide yields at the 5-tons-per-hectare level. This would push corn output to 7.8 million tons.

The extent of machinery use in the agriculture sector varies. In the production of some crops, mechanization has reached a fairly advanced stage, while in others it is less. In 1975, for example, 96 percent of the wheat crop was harvested mechanically, but only 66 percent of the corn crop. The difference was largely because much of Hungary's corn crop (30 percent) is grown on small household plots.

The current 5-year plan envisages a 50 percent gain in the number of machines of all types. The number of tractors is programmed to drop from the present 63,000 to 56,000 by 1980, and about 14,000 old-style harvester-combines will be replaced by 9,500 new, more efficient units. Mechanical harvesting or corn should increase to 80 percent by 1980, that of wheat to 98 percent.

But Hungary faces a major problem connected with the delivery of farm machinery—much of which is imported from the Soviet Union and West Germany. Because of inability to control the arrival of these foreign-made machines, Hungarian agricultural planners often deliver equipment to farmers after the harvest is completed.

Hungary's rate of fertilizer application has grown from less than 1 million tons in 1971 to 1.5 million tons in 1975. Plans call for a further increase to 2 million tons by 1980. Hungary produces up to 90 percent of the active ingredients in nitrogen-based fertilizer, but only 40 percent of the phosphate base. All potash fertilizers must be imported.

Although its use of plant protection chemicals also has grown in recent years, Hungary's chemical industry produces only about 45 percent of the country's needs, although in some instance the industry, using certain imported raw materials, can supply up to 60 percent of Hungary's requirements.

During the next few years, use of plant protection chemicals should increase from 32,600 tons in 1976 to 44,500 tons by 1980. By then, Hungary hopes to be able to supply 70 percent of these chemicals from domestic sources, import 8 percent from CEMA, and 22 percent from the West.

While the 5-year plan assures farmers that large volumes of inputs will be available, it does not consider the effect high prices will have on their usage. Chemical fertilizer prices were boosted in January 1976 and since then grain producers have been reluctant to buy all of the nutrients offered by the Government.

Preparing for the expected increase in grain production and exports, Hungary plans to build new storage facilities and to modernize existing ones. The present 2 million tons of storage space is believed inadequate to handle the steady flow of grain required to meet domestic needs, and at the same time fill export requirements and maintain grain quality. At the present, State marketing agencies are often forced to utilize temporary or auxiliary onfarm storage facilities.

Some 700,000 tons of new storage space are to be added to the existing capacity and an additional 700,000 tons modernized, for a total of 3.4 million tons. However, some Hungarian experts believe this storage capacity will still be inadequate, and the 14-million-ton grain crop which will put 7 million tons of grain into marketing channels—requires 5 million tons of storage. □

"If exports of 3 million tons are to be achieved by 1980, that year's production—at 14 million tons—would be sharply above that of the early 1970's. During the first 5 years of the decade, production averaged about 10.4 million tons . . ."

Stock Gains May Nip Resurgence of Abaca

By Peter Buzzanell

Thanks to the recent boom in demand for paper products, the Philippines and Ecuador—the world's top producers of abaca—expect strong gains in output and exports of abaca during 1977. Exports, however, have ceased to grow apace with production, resulting in the accumulating stocks and relatively low prices that periodically depress this cyclical industry.

A hard fiber traditionally used in cordage and more recently in paper and other pulp products, abaca has long been buffeted by the vagaries of weather and the fickleness of the marketplace. At one time, abaca was the preferred vegetable fiber for the best grades of commercial ropes and cables, including marine cordage because of its limited swelling when wet and resistance to salt water.

After World War II, however, abaca lost most of the marine cordage market to synthetics, mainly nylon, resulting in a lingering depression for abaca industires in the Philippines—the larger of the two top producers—and lessened opportunities for production elsewhere.

In recent years, the industry has been revitalized somewhat by expanded use of abaca in noncordage products, such as high-quality paper products requiring the superior qualities of abaca's long-fibered pulp. In addition, competition from synthetic petroleum byproducts had diminished somewhat with the rise in petroleum prices since 1973.

This strengthened competitive position, in turn, has sparked a resurgence in production of abaca that continues still, despite the worsening oversupply situation. For 1977, total abaca production is forecast at 94,300 tons, with output in Ecuador and the Philippines—accounting for almost all of the global production—up 14 percent and 12 percent, respectively, from 1976. Exports from Ecuador are expected to reach a record 11,500 tons, while Philippine abaca fiber exports should surpass 38,000 tons—their highest level since 1974.

Philippines. Abaca production here enjoyed a strong rebound in 1976, rising to an estimated 72,532 tons from 1975's low 46,135. Combining to account for the gain were improved demand both domestically and abroad and positive results from a 4-year Government program launched in 1975 to develop abaca production.

Harvested area reached 210,000 hectares last year, 14 percent over 1975's, with most of the gain coming from old plantings abandoned several years ago when the abaca market was severely depressed. Continued growth in production is forecast for 1977, to 81,250 tons—the highest level since 1974.

Exports last year also rose sharply, with shipments of unmanufactured abaca fiber climbing 48 percent above 1975's record low to 38,362 tons but still holding well below the pre-1974 normal. All three major traditional foreign customers — the United States, Japan, and the United Kingdom—increased their purchases substantially in 1976.

All told, these exports of abaca fiber (excluding products) earned some $20.1 million for the Philippines in 1976, compared with only $14.5 million in 1975.

Among the abaca products, shipments of cordage in 1976 totaled 10,588 tons, compared with 7,192 in 1975; handicraft products, continuing their steady growth of recent years, totaled 3,030 tons; and abaca pulp totaled 3,030 tons.

For 1977, exports of all abaca products are forecast to increase again, with fiber and cordage exports expected to reach 59,000 tons.

These trade gains have not been sufficient, however, to keep up with snowballing production and balings of abaca, and stocks of unmanufactured abaca had risen to 25,125 tons by 1976. A further buildup appears likely in 1977, as balings are continuing to outpace domestic consumption and exports.

Concurrently, prices have weakened considerably since reaching their mid-1974 highs, with 1976's average annual price of representative grades of non-Davao, c.i.f. Europe, falling below the average for 1975. However, the average price of all handstripped grades, representing the dominant share of Philippine production last year, was substantially above the 1975 level, indicating that demand has strengthened for this normally hower-priced fiber at the expense of machine-cleaned fiber.

Abaca is indigenous to the Philippines, where it has had a long history of domestic use and as an important export product. First recorded exports were in 1818, and until 1908 abaca was the country's top export earner. Prior to World War II, production was running at over 200,000 tons a year, compared with the 72,500 tons of 1976.

Despite this lessened role today, the Philippine abaca industry still employs several million people during peak production periods.

Because the entire operation is carried out by family labor, production costs are extremely low, compared with those in the other leading producer, Ecuador. Marketing channels are widely dispersed, with the product changing hands as many as five times before being sold to the foreign buyer.

While abaca's use in the paper industry is on the rise, traditional Philippine producers still identify abaca with rope production, which they view as a declining industry. The resulting pessimism within the industry has led to increased switching of land from high-quality abaca to bananas for the growing Japanese banana market.

Also, abaca cordage lost its tariff preference in the United States, the industry's main export market, with the expiration of the Laurel-Langley Agreement in 1974. Now, Philippine abaca cordage may enter the American market only on even terms with all other hard fibers.

Ecuador. Production here also rose in 1976, reaching 10,450 tons of dry fiber, compared with 9,350 in 1975. A further gain to 12,000 tons is seen for 1977.

In contrast to that of the Philippines, Ecuador's abaca is virtually all high-quality, machine-stripped fiber, produced largely under contract, which undoubtedly has contributed to the present upward trend in production. Even so, growers who came into production when prices were high in 1974 have been discouraged by the relatively

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low returns of the past 2 years and have begun to abandon production. The industry also has been plagued by a tight labor supply and increasing production costs, which rose 15 percent between 1975 and 1976 alone as a result of higher energy costs.

As a result of these problems, little expansion is foreseen for the near term beyond 1977. (The gain forecast for 1977 is based largely on the maturation of existing plantings.) And Ecuador's Ministry of Agriculture, which controls plantings, has not authorized an area increase since 1975, when plantings were boosted to the present 15,300 hectares.

Ecuador's exports of abaca fiber in 1976 reached a record 9,700 tons, with the United States receiving about 90 percent of the total, mostly for use by the specialty paper products industry. Ecuador last year also exported 641 tons of yarn, used mainly in the manufacture of rope, with the United States again the dominant buyer.

The 1977 export outlook has abaca achieving another record of about 11,500 tons—10 percent above the 1976 level.

Prices for Ecuadorean abaca, f.o.b. Guayaquil, rose to 24 U.S. cents per kilogram (54 cents per lb) in November 1974, then declined to around 15 cents per kilogram in 1975 and remained there for the balance of the year. In 1976, the price for abaca fiber ranged from 13 to 15 cents per kilogram. Despite the lower prices, the increased volume of exports pushed the total value of abaca exports to a record US$7.1 million in 1976, compared with $5.7 million in 1975 and only $1.7 million in 1973.

In contrast to the Philippines, Ecuador's stocks of abaca are quite low and normally do not exceed 1 or 2 months' production, owing to limited storage facilities, plus the fact that most production is on a contract basis. But because of the contract arrangements, Ecuador cannot hold its abaca off the market when prices are low or take advantage of high prices.

Abaca production in Ecuador began in the 1950's in the northwest corner of the country around Santo Domingo de los Colorados on the western slopes of the Colorados.

Exports of abaca did not begin until 1966, when strong demand from the pulp paper industry sparked increased production and exports of this high-quality, machine-picked abaca.

U.S. market. The United States traditionally has been the world's major purchaser of abaca, importing the bulk of the total annual exports of raw abaca fiber and cordage from Ecuador and the Philippines.

U.S. raw abaca imports in 1976 totaled 22,239 tons, up 20 percent from the 1975 level, but slightly below average annual imports during 1970-74. In 1976, the U.S. imported 14,186 metric tons of raw abaca fiber from the Philippines, less than one-half the level of imports a decade earlier, with a value of $6.6 million representing 64 percent of the total volume of raw abaca imports. However, this share was well above the 51 percent supplied in 1975.

Ecuador, source of high-quality, high-value abaca, contributed 36 percent to total abaca imports in 1976, off from the 46 percent attained in 1975. Nevertheless, volume was well above the 11 percent share of the U.S. market supplied during 1970-74.

The upturn in U.S. imports last year was caused in part by a replenishment of inventories drawn down during 1975, an increase in end-user demand, and the lowering of the prices for raw abaca during 1976. The latter point is illustrated by the 1976 unit import value of $538 per ton, compared with $803 per ton for 1975. In terms of total import value, abaca was the leading raw fiber import item in 1976 (excluding cotton).

Raw abaca imports in January-March 1977 totaled 12,024 tons valued at $6.7 million, compared with 6,815 tons valued at $3.8 million for the comparable period a year ago. Unit import prices for the first 6 months of 1977 totaled $553 per ton, with unit import values for abaca from the Philippines and Ecuador averaging $482 per ton and $669 per ton, respectively.

In the recent past, raw abaca fiber from the Philippines was imported into the United States for the domestic manufacture of rope, while wornout rope was salvaged for processing by the fledgling specialty paper industry. With the declining use of abaca rope, owing to market inroads from synthetic cordage, the bulk of the remaining abaca rope market in the United States was supplied by increased levels of imported rope, primarily from the Philippines.

In 1976, U.S. imports of abaca cordage from the Philippines totaled 5,784 metric tons or 97 percent of total imports valued at $5.8 million. Abaca cordage imports for the first 6 months of 1977 totaled 3,972 tons valued at $3.9 million with almost all imports coming from the Philippines.

While overall imports of raw abaca fiber have declined in recent years, their direct use by the pulp and paper industry has increased, in part reflecting the smaller supplies of wornout abaca rope available for salvage, but more importantly reflecting abaca's use in the production of specialty paper products, such as tea bags, meat casing papers, medical disposals, and filtration systems. □

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USSR Plans Faster Growth In Manmade Fiber Output

The Soviet Union's output of chemical fibers (staple fibers and filaments) reached a record 1 million metric tons in 1976, following steady increases during the past several years.

The 1976 record was 25 percent above the 1971-75 average, almost double that of 1966-70, and more than triple the 1961-65 average.

Production is scheduled to reach 1.1 million tons in 1977 (up 8 percent from the 1976 level) and almost 1.5 million tons in 1980 (up 43 percent).

To accomplish these goals, the Soviets plan to:

- Reconstruct existing chemical fiber factories and construct new ones during 1976-80;
- Add new production capacity in 1977 for 140,000 tons of chemical fibers;
- Increase investment for research and experiment in chemical fiber production by 1.5 times in 1976-80 over outlays in 1971-75;
- Boost State capital construction investment in manmade fiber factories 1.2 times during 1976-80 over total investments during 1966-70 and 1971-75;
- Raise labor productivity in 1980 by 1.6 times over that of 1975.

During January-April 1977, output of chemical fibers (including filaments) in the USSR totaled a record 361,000 tons—4,000 tons above plan and 6 percent above output during the corresponding period of 1976.

Reportedly, about two-thirds of total output of manmade fibers goes into textiles and the remainder into technical purposes.

A large percentage of woven cloth and knitted fabrics manufactured by the textile industry consists of blends—i.e., natural fibers with manmade fibers.

Of the USSR's total output of silk-type cloth and wool cloth, averages of 97 percent and 84 percent, respectively, are blends.

Similarly, of total output of linen cloth, knitted undergarments, stockings, and knitted outer garments, averages of 47, 45, 39, and 37 percent, respectively, are blends.

In comparison, the United States produced 3.7 million tons of manmade fibers (for textiles only) in 1976; the USSR produced 2.6 million tons of cotton fiber in 1976/77. Only 15 percent of cotton cloth, however, consists of blends.

Soviet Imports of manmade fibers and filaments have decreased in recent years— from a high of more than 100,000 tons in 1970 to 60,000 tons in 1975.

In recent years, the United Kingdom and Finland have been the major suppliers of cellulosic fibers to the USSR, with the U.K. the major supplier until 1972 and Finland since that time.

Since 1974, Japan also has been a major supplier. Bulgaria, once an important source has dropped in importance. The United States was a supplier to the USSR for several years, but its exports of these products to the USSR declined from a high of 4,000 tons in 1970 to 1,500 tons in 1975.

Soviet imports of manmade filaments have increased sharply from a low of 5,000 tons in 1965 to a peak of 27,000 tons in both 1974 and 1975.

Major suppliers of cellulosic filament to the USSR in recent years have been the United States, the United Kingdom, Japan, and (until 1974) Italy.

During 1971-74, the United States was the major supplier of cellulosic filaments to the USSR, but in 1975 exports to that country dropped sharply to 5,200 tons from a peak of 7,300 in 1973.

Japan was the major supplier in 1975. Noncellulosic filament suppliers to the USSR are mainly the United Kingdom, Japan, and Italy. The United States was a supplier to the USSR only in 1970, with exports of 425 tons.

The USSR is not an exporter of manmade fibers, but does export natural fiber textiles. These exports have ranged from 28 million meters in 1968 to a peak 48 million meters in 1974. In recent years, the major recipients have been Bulgaria, North Vietnam, Libya, and Finland. □

By Angel O. Byrne, economist, Foreign Demand and Competition Division, Economic Research Service.